

## REMARKS

### 1. Introduction

In the Office Action mailed May 29, 2008, the Examiner rejected claims 1-6, 8, 16-18, and 20-24 under 35 U.S.C. § 103(a) as allegedly being unpatentable over O'Connor, U.S. Pub. No. 2004/0002339 ("O'Connor") and Yang, U.S. Pub. No. 2002/0114334 ("Yang").

The Examiner rejected claims 9-14 under 35 U.S.C. § 103(a) as allegedly being unpatentable over O'Connor and Yang and further in view of Choi *et al.*, U.S. Patent No. 6,724,740 ("Choi").

The Examiner rejected claim 7 under 35 U.S.C. § 103(a) as allegedly being unpatentable over O'Connor and Yang and further in view of Nee *et al.*, U.S. Pat. No. 6,876,857 ("Nee").

The Examiner rejected claim 15 under 35 U.S.C. § 103(a) as allegedly being unpatentable over O'Connor, Yang, and Choi, and further in view of Nee.

The Examiner rejected claim 19 under 35 U.S.C. § 103(a) as allegedly being unpatentable over O'Connor, Yang, and Choi.

For the reasons set forth below, Applicants respectfully request reconsideration and allowance of the application.

### 2. Response to Claim Rejections

#### a. Claims 1-8

Of these claims, claim 1 is independent. The Examiner has rejected claim 1 under § 103(a) as being unpatentable over O'Connor in view of Yang. Applicants submit that this rejection is improper. However, in order to expedite prosecution, Applicants have amended claim 1 to recite "responsively changing the bandwidth algorithm, so as to change how the

system dynamically allocates the radio frequency bandwidth among the *active* mobile stations.” This amendment is supported by Applicants’ specification, for example, at page 3, lines 2-6. Applicants submit that amended claim 1 is clearly allowable over O’Connor in view of Yang, as set forth below.

The Examiner has admitted that “O’Connor fails to explicitly teach determining that the number of mobile stations exceeds a threshold.” Office Action, p. 3. Nonetheless, the Examiner asserted “it is inherent that O’Connor compares the active mobile devices to a threshold, since for example, O’Connor teaches when the network bandwidth allocation device receives a suspend packet from a mobile device, it realizes that the bandwidth available to the network has increased...and can accordingly dynamically allocate additional bandwidth to one or more devices on the network,” specifically citing to paragraph 57. *See* Office Action, p. 4 (emphasis changed).

However, the Examiner’s inherency argument is invalid because the Examiner has failed to establish that comparison to a threshold *necessarily* occurs in O’Connor’s system:

In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art.

*See* MPEP § 2112(IV), quoting *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990). What paragraph 57 describes is a *change* in the number of mobile devices that are using bandwidth. This change can occur regardless of whether the number of active mobile stations is above or below a threshold. Thus, there is no basis in fact and/or technical reasoning to suppose that the change is detected by comparing the number of active mobile stations to a threshold. To the contrary, paragraphs 56 and 57 of O’Connor state that the mobile device itself informs the

network when the mobile device is not using bandwidth by sending a *suspend packet*. Since the mobile devices inform the network regarding their bandwidth usage, there would be no need in O'Connor's system to compare the number of active mobile stations to a threshold. Thus, the Examiner's rejection based on O'Connor is clearly erroneous.

In any event, Applicants have amended claim 1 to specify that the change in how the system dynamically allocates bandwidth applies to the *active* mobile stations. As the Examiner has admitted, O'Connor does not explicitly teach changing a bandwidth allocation algorithm. *See* Office Action, p. 3. Instead, the Examiner has relied on Yang for this element, arguing that "Yang teaches a system and method related to allocating and managing system bandwidth, wherein different scheduling algorithms can be implemented for allocating bandwidth among different mobile aggregation classes." *See* Office Action, p. 4. However, Yang does not make up for the acknowledged deficiency in O'Connor, as set forth below.

Yang discloses that the aggregation classes include both at least one favored and at least one disfavored aggregation class, and Yang describes two different bandwidth allocation algorithms for the two classes. *See* Yang, ¶ 0038-0043 (describing a token bucket algorithm for favored classes), and ¶ 0044-0045 (describing round-robin algorithms for disfavored classes). However, Yang does not disclose *changing* the bandwidth allocation algorithm for *active* mobile stations. In this regard, Yang does not describe changing a bandwidth allocation algorithm for a given aggregation class under any conditions. Further, Yang explains that each *active network session* is aggregated into an aggregation class. *See* Yang, ¶ 0036. However, Yang does not disclose changing the aggregation class of a session while it is still active. Thus, once an active network session is assigned to an aggregation class, the bandwidth allocation algorithm used to allocate bandwidth for that active session does not change. Therefore, Yang does not teach

“changing the bandwidth allocation algorithm, so as to change how the system dynamically allocates the radio frequency bandwidth among the *active* mobile stations,” as recited in amended claim 1.

Accordingly, Applicants submit that claim 1, as amended, is allowable over O’Connor and Yang for at least the foregoing reasons. Applicants further submit that claims 2-8 are allowable for at least the reason that they are dependent on an allowable claim.

**b. Claims 9-15**

Of these claims, claim 9 is independent. The Examiner has rejected claim 9 under § 103(a) as being unpatentable over O’Connor in view of Yang and further in view of Choi. Applicants submit that this rejection is improper. However, in order to expedite prosecution, Applicants have amended claim 9 to recite “responsively changing the bandwidth algorithm for the mobile stations being provided communication services in the given coverage area.” This amendment is supported by Applicants’ specification, for example, at page 3, lines 2-6. Applicants submit that amended claim 9 is clearly allowable over O’Connor, Yang, and Choi, as set forth below.

As discussed above for claim 1, O’Connor does not disclose comparing the number of active mobile stations to a threshold. Thus, O’Connor does not disclose “determining that a threshold number of mobile stations being provided communication services are concurrently operating in the given coverage area,” as recited in claim 9.

Further, in rejecting claim 9, the Examiner has admitted that “O’Connor fails to explicitly teach responsively changing a bandwidth allocation algorithm.” *See* Office Action, p. 10. As discussed above for claim 1, Yang does not make up for this deficiency in O’Connor because Yang does not teach changing the bandwidth allocation algorithm while a session is active. Choi

also does not make up for the acknowledged deficiency in O'Connor. Therefore, the combination of O'Connor, Yang, and Choi fails to teach "responsively changing a bandwidth allocation algorithm for the mobile stations being provided communication services in the given coverage area," as recited in amended claim 9.

Accordingly, Applicants submit that claim 9, as amended, is allowable over O'Connor, Yang, and Choi for at least the foregoing reasons. Applicants further submit that claims 10-15 are allowable for at least the reason that they are dependent on an allowable claim.

**c. Claims 16-19**

Of these claims, claim 16 is independent. The Examiner has rejected claim 16 under § 103(a) as being unpatentable over O'Connor in view of Yang. In response, Applicants submit that the rejection is improper and should be withdrawn because O'Connor in view of Yang does not teach each and every element of claim 16, as set forth below.

As discussed above for claim 1, O'Connor does not disclose comparing the number of active mobile stations to a threshold. Thus, O'Connor does not disclose "determining that the number of mobile stations concurrently being provided communication services by the wireless network is below a predetermined threshold number," as recited in claim 16.

In addition, neither O'Connor nor Yang discloses comparing the amount of buffered traffic to a threshold. O'Connor describes an ITG that allocates the available bandwidth in a network. *See* paragraphs 52-58. O'Connor also describes codec negotiation of both the G.711 and G.729 codecs during call setup and dynamic control of the two above-mentioned codecs. *See* O'Connor, Figures 7-10 and ¶ 0065-0077. However, O'Connor does not disclose or suggest buffering an amount of voice or data traffic, use of a predetermined threshold amount of buffered voice or data traffic, or determining that the buffered amount of voice or data traffic is above the

predetermined threshold amount, as recited in claim 16. Applicants further submit that Yang does not make up for this deficiency in O'Connor.

Accordingly, claim 16 is allowable over O'Connor and Yang for at least the foregoing reasons. Applicants further submit that claims 17-19 are allowable for at least the reason that they are dependent on an allowable claim.

**d. Claims 20-24**

Of these claims, claim 20 is independent. The Examiner rejected claim 20 under § 103(a) as being unpatentable over O'Connor in view of Yang. In response, Applicants have amended claim 20 to recite program logic “to change the bandwidth allocation algorithm based on the number, so as to change how the system dynamically allocates the radio frequency bandwidth among the active mobile stations.” This amendment is supported by Applicants’ specification, for example, at page 3, lines 2-6. Applicants submit that amended claim 20 is clearly allowable over O'Connor in view of Yang, as set forth below.

In rejecting claim 20, the Examiner admitted that “O'Connor fails to explicitly teach changing the bandwidth allocation algorithm bases on the number, so as to change how the system dynamically allocates the radio frequency bandwidth.” *See* Office Action, p. 6. Instead, the Examiner has relied on Yang for this element. *See* Office Action, p. 7. However, as discussed above for claim 1, Yang does not disclose changing the bandwidth allocation algorithm for *active* sessions. Therefore, O'Connor in view of Yang does not disclose program logic “to change the bandwidth allocation algorithm based on the number, so as to change how the system dynamically allocates the radio frequency bandwidth among the *active* mobile stations,” as recited in amended claim 20.

Accordingly, Applicants submit that claim 20, as amended, is allowable over O'Connor and Yang for at least the foregoing reasons. Applicants further submit that claims 21-24 are allowable for at least the reason they depend on an allowable claim.

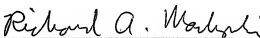
3. **Conclusion**

Applicants submit that the present application is in condition for allowance, and notice to that effect is hereby requested. Should the Examiner feel that further dialog would advance the subject application to issuance, the Examiner is invited to telephone the undersigned at any time at (312) 913-0001.

Respectfully submitted,

Dated: August 26, 2008

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